

CLAIMS

1. A Viterbi decoder comprising:

5 a branch metric calculation section calculates branch metrics of all paths from a state at a previous time to a state at a present time based on an input code;

an ACS calculation section that selects a most probable path from the paths arriving at respective states at the present time based on the branch metrics calculated
10 by the branch metric calculation section and given path metrics, and outputs a path select signals determined by the selected path and path metrics required to arrive at the state at the present time;

a path metric storage section storing the path metric
15 output from the ACS calculation section;

a path select signal temporary storage section that stores the path select signals of n states output from the ACS calculation section;

a path select signal storage section that stores the
20 path select signals stored in the path select signal temporary storage section in order over a length of a series of traceback; and

a traceback processing section that generates decoded data based on the path select signals stored in
25 the path select signal storage section.

2. The Viterbi decoder according to claim 1, wherein

the path select signal temporary storage section comprises an n bit shift register for path select signals, and the shift register for path select signals receives the path select signals as input from a predetermined
5 bit position.

3. The Viterbi decoder according to one of claim 1 and 2, wherein:

the traceback processing section comprises:
10 a barrel shifter that shifts path select signals read from the path select signal storage section; and
a data decoding shift register that receives as input one bit shifted to a predetermined bit position
15 by the barrel shifter; and
the traceback processing section converts content of bits from an input bit position of the data decoding shift register to a predetermined bit position according to the input code information and generates a number of
20 shifts of the path select signals of the barrel shifter.